

HW#40: Divide Radicals

Geometry - FORM A

Due Date: Wednesday, November 28<sup>th</sup>, 2012

Name: \_\_\_\_\_ TP: \_\_\_\_\_

Failure to show work on all problems or use complete sentences will result in a LaSalle.

<p>1) What is the value of <math>b</math> in the expression below:</p> $x^{3b} x^{4b+10} = x^{80}$ $3b + 4b + 10 = 80$	<p>2) Simplify: <math>\frac{25(g^3)^3}{(5gh^0)^2} = \frac{25g^9}{25g^2} =</math></p>
<p>3) Simplify: <math>6^1 - 6^{-1} + 6^2</math>. <sup>①</sup> Calculator *use parentheses carefully</p>	<p>4) Simplify: <math>\sqrt{150n^4} = \sqrt{150} \cdot \sqrt{n^4}</math> <math>= \sqrt{25} \cdot \sqrt{6} \cdot \sqrt{n^2} \cdot \sqrt{n^2}</math></p>
<p>5) Simplify: <sup>①</sup> <math>\sqrt{392} \cdot \sqrt{x} \cdot \sqrt{y^3}</math> <math>\sqrt{392xy^3}</math> <sup>②</sup> simplify</p>	<p>6) Simplify: <sup>①</sup> <math>\sqrt{2}(\sqrt{3} + 4\sqrt{2})</math> <math>\sqrt{6} + 4\sqrt{4}</math> <sup>②</sup> simplify</p>
<p>7) Simplify: <math>2\sqrt{3x} \cdot 3\sqrt{5x} = 6\sqrt{3x \cdot 5x}</math> <math>=</math></p>	<p>8) Simplify: <math>\frac{2\sqrt{7}}{3\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \frac{2\sqrt{35}}{3\sqrt{5} \cdot \sqrt{5}} =</math></p>
<p>9) Simplify: <math>\sqrt{\frac{125}{4x^3}} = \frac{\sqrt{125}}{\sqrt{4x^3}} =</math></p>	<p>10) Simplify: <math>\sqrt{\frac{7m^5}{11}} = \frac{\sqrt{7m^5}}{\sqrt{11}} \cdot \frac{\sqrt{11}}{\sqrt{11}} =</math></p>

**PUSH IT TO THE LIMIT.**

# Mixed Review

<p>11) Line <math>\ell</math> and line <math>\ell'</math> are parallel. Given that the equation for line <math>\ell'</math> is <math>x - y = 5</math> and line <math>\ell</math> passes through the point <math>(-6, 0)</math>, what is the equation for line <math>\ell</math>?</p> <p>1. rearrange to <math>y = mx + b</math> form  2. Use <math>(-6, 0)</math> to find value of 'b'  3. Parallel lines have same slope  4. Re-write equation for <math>\ell</math> in <math>y = mx + b</math></p>	<p>12) What is the equation for the line parallel to <math>x - 6y = -13</math> and through the point <math>(2, 5)</math>?</p> <p>* Same as #11</p>
<p>13) Point m is the midpoint to line segment BC. Point C has the coordinates <math>(3, 4)</math> and point B has the coordinate <math>(-12, 6)</math>, what are the coordinates for point m?</p> <p>midpoint = <math>\left( \frac{x_2 - x_1}{2}, \frac{y_2 - y_1}{2} \right)</math></p>	<p>14) On a number line, point A is at -13 and point B is at 8. What is the coordinate of the midpoint, m?</p> <p><math>\frac{x_2 - x_1}{2}</math></p>
<p>15) What is the slope of the line that passes through the points <math>(-8, 2)</math> and <math>(6, 6)</math> in the standard coordinate plane?</p> <p>slope = <math>\frac{y_2 - y_1}{x_2 - x_1}</math></p>	<p>16) Write the equation of the line that passes through the points <math>(-7, 4)</math> and <math>(3, -2)</math>?</p> <p>① find slope  ② use coordinate to find 'b' in <math>y = mx + b</math>  ③ re-write <math>y = mx + b</math> with 'm' and 'b'</p>

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